

Claims

1. An apparatus for aspirating, irrigating and/or cleansing wounds, characterised in that it comprises
- 5 a) a fluid flow path, comprising
- i) a conformable wound dressing, having
a backing layer which is capable of forming a relatively fluid-tight seal
or closure over a wound and
at least one inlet pipe for connection to a fluid supply tube, which
10 passes through and/or under the wound-facing face, and
and at least one outlet pipe for connection to a fluid offtake tube, which
passes through and/or under the wound-facing face,
the point at which the or each inlet pipe and the or each outlet pipe
passes through and/or under the wound-facing face forming a
15 relatively fluid-tight seal or closure over the wound,
at least one inlet pipe being connected to a fluid recirculation tube, and
at least one outlet pipe being connected to a fluid offtake tube: and
- ii) a means for fluid cleansing having at least one inlet port connected to
a fluid offtake tube and at least one outlet port connected to a fluid
20 recirculation tube;
- b) a fluid reservoir connected by a fluid supply tube to an integer of the flow
path (optionally or as necessary via means for flow switching between
supply and recirculation);
- c) a device for moving fluid through the wound dressing and means for fluid
25 cleansing, and optionally or as necessary the fluid supply tube;
- d) means for supplying physiologically active agents to the wound; and
- e) optionally means for bleeding the flowpath,
such that fluid may be supplied to fill the flowpath from the fluid reservoir via
the fluid supply tube (optionally or as necessary via the means for flow
30 switching) and recirculated by the device through the flow path.
2. An apparatus according to claim 1, characterised in that the means for
supplying physiologically active agents to the wound comprises the fluid
reservoir containing physiologically active components in therapeutically
35 active amounts to promote wound healing.

3. An apparatus according to claim 1, characterised in that the physiologically active agents for supply to the wound are autologous, allogeneic and xenogeneic blood or blood products, platelet lysates, plasma or serum;
- 5 natural purified protein or recombinant-produced protein growth factors; or natural purified protein or recombinant produced protein cytokines; materials to achieve the delivery of nucleic acid molecules as active genes or gene-containing vectors, as naked molecules, molecules complexed with nucleic acid binding carriers, molecules within liposomes or as virus
- 10 vectors; or combinations thereof.
4. An apparatus according to claim 1, characterised in that the physiologically active agents for supply to the wound are materials that are beneficial in promoting wound healing by removing materials or by regulating, limiting or
- 15 inhibiting processes deleterious to wound healing from wound exudate which are natural purified protein or recombinant-produced protein proteinase inhibitors; inhibitors of inhibitors of angiogenesis;
- 20 antioxidants; free radical scavengers or degraders; free radical generators; or combinations thereof.
- 25 5. An apparatus according to claim 1, characterised in that the physiologically active agents for supply to the wound are natural purified protein or recombinant-produced protein debriding agents.
- 30 6. An apparatus according to claim 1, characterised in that the physiologically active agents for supply to the wound are nutrients for wound cells, antimicrobials, antifungal agents, antibiotics, antibacterial agents, local analgesics/anaesthetics, or combinations thereof.

- 5 7. An apparatus according to claim 1, characterised in that it comprises a means for fluid cleansing that is a single-phase system, in which the circulating fluid from the wound passes through the means for fluid cleansing and materials deleterious to wound healing are removed, without the circulating fluid coming into direct or indirect contact with another fluid in the means for fluid cleansing.
- 10 8. An apparatus according to claim 1, characterised in that it comprises a means for fluid cleansing that is a two-phase system, in which the circulating fluid from the wound passes through the means for fluid cleansing and materials deleterious to wound healing are removed, by the circulating fluid coming into direct or indirect contact with another fluid in the means for fluid cleansing.
- 15 9. An apparatus according to claim 3, characterised in that in the means for fluid cleansing, the circulating fluid from the wound and the other fluid in the means for fluid cleansing are separated by an integer which is selectively permeable to materials deleterious to wound healing.
- 20 10. An apparatus according to claim 3, characterised in that in the means for fluid cleansing, the circulating fluid from the wound and the other fluid in the means for fluid cleansing are separated by an integer which is not selectively permeable to materials deleterious to wound healing, and the other fluid comprises and/or is in contact with a material that removes
- 25 materials deleterious to wound healing.
- 30 11. A conformable wound dressing for use in an apparatus according to claim 1, characterised in that it comprises a backing layer with a wound-facing face which is capable of forming a relatively fluid-tight seal or closure over a wound and has at least one inlet pipe for connection to a fluid supply tube, which passes through and/or under the wound-facing face, and at least one outlet pipe for connection to a fluid offtake tube, which passes through and/or under the wound-facing face,

the point at which the or each inlet pipe and the or each outlet pipe passes through and/or under the wound-facing face forming a relatively fluid-tight seal or closure over the wound.

- 5 12. A method of treating wounds to promote wound healing using the apparatus for aspirating, irrigating and/or cleansing wounds according to claim 1.